## Observations of Comet Saaverthal taken at the Adelaide Observatory. Lat. 34° 55' 33″·8 S.; Long. 9ʰ 14ᵐ 21ˢ·3 E.

*(Communicated by Charles Todd, C.M.G., Government Astronomer.)*

| Date 1888 A.M.T. (h m s) | Name of Ref. Star. | Apparent Position of Reference Star R.A. (h m s) | N.P.D. (° ′ ″) | Diff. ☄−★ R.A. (m s) | N.P.D. (′ ″) | Correction for Diff. Refrac. R.A. (s) | N.P.D. (″) | Apparent Position of Comet. R.A. (h m s) | N.P.D. (° ′ ″) |
|---|---|---|---|---|---|---|---|---|---|
| Feb. 23  15 30 0 | ... | ... | ... | ... | ... | ... | ... | 19 41 10 | 140 0 35 |
| ,,   25  16 0 | Argentine 27367 | 19 53 16·0 | 137 42 3 | −1 4·1 | −29 57 | ... | ... | 19 52 11·9 | 137 12 6 |
| ,,   27  15 39 36·07 | ,, 27562 | 20 20 04 | 134 13 6·03 | −0 6·58 | + 7 56·4 | ·00 | +0·2 | 20 2 13·46 | 134 21 2·6 |
| ,,   29  16 10 17·46 | ,, 27739 | 20 9 13·73 | 131 14 45·2 | +1 17·62 | + 7 37·8 | ·00 | +0·2 | 20 10 31·35 | 131 22 23·2 |
| Mar. 12  16 19 55·10 | ,, 28854 | 20 57 7·49 | 113 4 50·1 | +0 36·96 | + 0 13·3 | ·00 | 0·0 | 20 57 44·45 | 113 5 3·4 |
| ,,   18  16 40 1 | ,, 29400 | 21 21 14·45 | 104 4 25·3 | −3 22·95 | +10 15·1 | −·03 | +0·5 | 21 17 51·47 | 104 14 40·9 |
| ,,   26  16 57 49·96 | Weisse 1056 | 21 46 30·89 | 93 42 6·7 | −2 57·11 | −10 38·0 | +·03 | −0·6 | 21 43 33·81 | 93 31 28·1 |
| Apr.  4  17 9 49·42 | ,, 147 | 22 9 38·78 | 83 31 45·1 | +1 46·81 | −11 55·8 | +·06 | −0·9 | 22 11 25·65 | 83 19 48·4 |

From the observations of March 12, 18, and 26, the following parabolic elements have been computed by Mr. E. C. Cooke, Assistant-Astronomer.

$$T = \text{Mar. } 16 \cdot 970 \text{ G.M.T.}$$
$$\pi = 245^\circ\ 19'\ 35''$$
$$\mathrm{\Omega} = 245^\circ\ 28'\ 6''$$
$$i = 42^\circ\ 14'\ 36''$$
$$\log q = 9 \cdot 8445376$$

Motion direct.

*Adelaide Observatory:*
    *1888, May 14.*

*Sextant Observations of Comet a, 1888 (Sawerthal), made on board the ship " Alcester."* By Captain Leonard C. Dart.

(*Communicated by Lieut. C. W. Baillie.*)

1888, March 22. Position at noon by Dead Reckoning: Lat. 3° 24′ S., long. 88° 32′ E.

4·30 A.M. At 10$^h$ 43$^m$ G.M.T., comet visible; distant from *Altair* 31° 17′, distant from *Arided* 56° 4′, bearing from the planet *Venus*, W.bN., distant 12° 54′. Tail W.S.W. from nucleus about 2° in length. Sky clouded up at the time of taking bearing and did not get the comet's altitude.

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*Ephemerides of the Satellites of Saturn, 1888–89.* By A. Marth.

In the following ephemerides the five inner satellites are assumed to move in circular orbits in the plane of the ring, the ascending node N and inclination J of which, in reference to the plane of the Earth's equator, are assumed to be

for 1889·0     N = 126°·6663.     J = 6°·9887.

P denotes the position-angle of the minor axis of the ring, L + 180° the planeocentric longitude of the Earth referred to the plane of the ring, Λ + 180° that of the Sun, or Λ − L the difference between the two. The last column contains the values of log *v* = 0·950 − log Δ, the *Naut. Alm.* values of the distances Δ of the planet from the Earth being so altered as to take the equation of light into account.

| Greenwich Noon. | P | L | Latitude of Earth above plane of Ring. | Sun above plane of Ring. | Λ − L. | Log *v*. |
|---|---|---|---|---|---|---|
| 1888. | ° | ° | ° | ° | ° | |
| Oct. 19 | 353·030 | 143·253 | −14·114 | −16·536 | −5·449 | 9·973631 |
| 24 | ·045 | 143·582 | 13·980 | 16·570 | 5·602 | ·977211 |
| 29 | ·059 | 143·876 | 13·862 | 16·403 | 5·719 | ·980917 |
| Nov. 3 | 353·071 | 144·133 | −13·761 | −16·336 | −5·799 | 9·984729 |
| 8 | ·082 | ·350 | 13·678 | 16·269 | 5·840 | ·988621 |
| 13 | ·090 | ·526 | 13·614 | 16·202 | 5·840 | ·992567 |
| 18 | ·096 | ·661 | 13·570 | 16·135 | 5·799 | 9·996539 |
| 23 | ·100 | ·754 | 13·545 | 16·068 | 5·716 | 0·000509 |
| 28 | ·102 | ·804 | 13·540 | 16·000 | 5·590 | ·004448 |
| Dec. 3 | 353·102 | 144·810 | −13·555 | −15·933 | −5·420 | 0·008322 |
| 8 | ·100 | ·772 | 13·591 | 15·865 | 5·207 | ·012095 |
| 13 | ·095 | ·691 | 13·647 | 15·797 | 4·951 | ·015730 |
| 18 | ·088 | ·569 | 13·721 | 15·729 | 4·653 | ·019194 |
| 23 | ·079 | ·406 | 13·813 | 15·661 | 4·315 | ·022451 |
| 28 | ·068 | 144·204 | 13·923 | 15·593 | 3·938 | ·025468 |